

[3.0059]

AN UNUSUAL NEW *Pseudochthonius* FROM BRAZIL
(Arachnida, Pseudoscorpionida, Chthoniidae)¹

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In the collections of the American Museum of Natural History was discovered a single specimen of a remarkable species of pseudoscorpion. Resembling *Pseudochthonius* in many details, it nevertheless differs from all known species of that genus in some very important features, so that it is desirable to present a formal description. This work was supported in part by a grant (GB 17964) from the National Science Foundation.

Pseudochthonius orthodactylus, NEW SPECIES

Material: Holotype male (WM 634.01001) from Belem, Brazil, 8 February 1959 (A. M. Nadler).

Description: Male: Generally similar to other members of the genus except that the chelal fingers are shorter and lack the distinctive curves seen in most species. Body quite small and all parts weakly sclerotized and pale in color. Carapace slightly longer than broad; epistome broad and strongly serrate; surface nearly smooth; two weak eyes present, about one ocular diameter from the anterior margin. Carapace with 14 long, slender setae and a microseta in front of each eye: m3m-3-4-2=16 (normal total is probably 18). Coxal area typical; chaetotaxy 2-2-1:m-2-1-cs:2-3-cs:2-5:2-6; with three finely pinnate spines (Fig. 1) on each coxa I and five similar spines on each coxa II; no intercoxal tubercle present.

Abdomen typical. Tergal chaetotaxy 4:4:4:4:6:6:6:6:6:3:4:0. Sternal chaetotaxy 4-4:[4-4]:(3)⁷⁻⁷/₅:(3)(3)10(3):8:8:8:8:6:4:0:2; spiracles oriented transversely and without distinct guard sclerites. Pleural membranes with very small granules.

Chelicera about twice as long as broad and 0.6 as long as carapace. Palm with five setae; fixed finger with nine teeth, the distalmost the largest; movable finger with one large distal tooth, plus a row of ten smaller ones; galea represented by a low elevation; serrula exterior of 15 blades, flagellum of seven or eight pinnate setae.

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Palps moderately long and slender; femur 1.14 and chela 1.61 times as long as carapace. Proportions of segments shown in Fig. 2; especially noteworthy are the relatively short and straight fingers of chela. Trochanter 1.65, femur 5.25, tibia 2.0 and chela 7.4 times as long as broad; hand 2.95 times as long as deep; movable finger 1.35 times as long as hand. Surfaces smooth except for femur, which is weakly reticulated. Trichobothria of chela as shown in Fig. 3. Fixed finger of chela with two small distal denticles, followed by 13 large, sharp, spaced teeth, then by three low, rounded contiguous teeth; movable finger with one, seven and twelve similar teeth. Movable finger with a conspicuous, large apodeme projecting from dorsal side of basal end; this process provides a surface for the attachment of some, but not all, of the fibers of the adductor muscle.

Legs moderately slender. Leg IV with entire femur 2.25 and tibia 3.4 times as long as deep; trichobothria on metatarsus 0.36 and on telotarsus 0.12 length of segment from proximal end.

Female: Unknown.

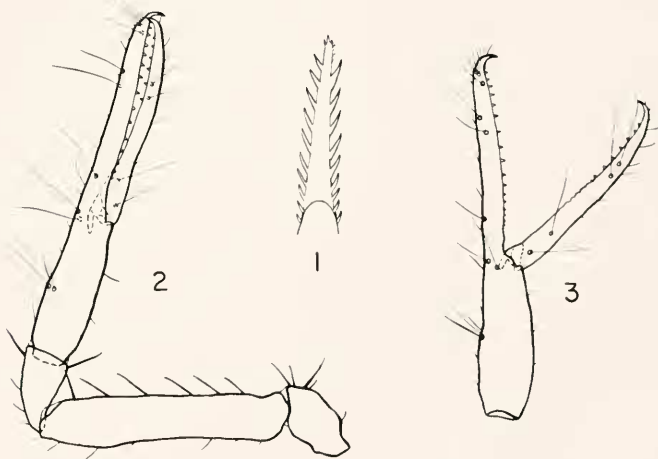
Measurements (in mm): Body length 1.07. Carapace 0.39 long and 0.315 broad across eyes. Chelicera 0.24 by 0.125; movable finger 0.125 long. Palpal trochanter 0.14 by 0.085; femur 0.445 by 0.085; tibia 0.16 by 0.08; chela 0.63 by 0.085; hand 0.265 by 0.09; movable finger 0.36 long. Leg IV: entire femur 0.385 long; basifemur 0.23 by 0.17; telofemur 0.24 by 0.15; tibia 0.34 by 0.07; metatarsus 0.14 by 0.05; telotarsus 0.26 by 0.03.

Remarks: The pseudoscorpion described above is placed in the genus *Pseudochthonius* for the present, although strong arguments could be made for placing it in a separate, new genus. It appears to belong to *Pseudochthonius* because of the nature of the coxal area, including the shape and placement of the coxal spines, the nature of the spiracular areas, the structure and the chaetotaxy of the carapace, the placement of the trichobothria on the palpal chela, and most details of the genital area (see Chamberlin, 1929; Hummelinck, 1948; Hoff, 1963). However, it differs markedly from all other known members of the genus in the structure of the palpal chela, which is as a whole unique. While most other species of *Pseudochthonius* have long, gracefully curved chelal fingers with the fixed finger strongly hooked terminally and the movable finger meeting the fixed finger far proximad of the tip, *P. orthodactylus* has relatively short, straight chelal fingers which meet with their tips nearly in contact. Further, in most other *Pseudochthonius* the teeth on the two chelal fingers are distinctly different, the fixed finger having alternating large and small, spaced, acute teeth (except in *P. homodentatus*) and the movable finger having more or less contiguous and uniform, small, retrocuneate teeth; in *P. orthodactylus*, on the other hand, the teeth are similar in shape and nearly equally developed on the two fingers, nowhere being alternately large and small. Also, the apodeme for the attachment of the adductor muscle to the base of the movable finger is long and heavy in *P. orthodactylus*, but is small, or entirely absent in other members of the genus. The condition of the chela in *P. orthodactylus* can be viewed reason-

ably as more primitive, i.e., less highly modified, than the corresponding features in other species. If it can be accepted that *P. orthodactylus* is indeed more primitive in these respects than other members of the genus, then comparison of *Pseudochthonius* with other genera of the Chthonioidea is made much easier. In fact, a consideration of the relationship between *Pseudochthonius* and the unusual, cave-restricted genus *Aphrastochthonius*, based upon this point of view, will appear shortly in another paper.

Literature cited

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Pseudochthonius orthodactylus, new species, holotype male. Fig. 1. Single coxal spine from pedal coxa II. Fig. 2. Dorsal view of left palp. Fig. 3. Lateral view of right chela.

2.0059. An unusual new *Pseudochthonius* from Brazil (Arachnida, Pseudoscorpionida, Chthoniidae). Abstract.—The new species, *Pseudochthonius orthodactylus*, differs from others in the genus in certain characters which suggest that it is a primitive member of the group.—William B. Muchmore, Department of Biology, University of Rochester, Rochester, NY 14627.

Descriptors: Arachnida, Pseudoscorpionida, Chthoniidae, *Pseudochthonius orthodactylus*, Brazil.